

**What is claimed is:**

1. Evaporator, especially a respiratory humidifier, comprising:  
a storage tank for a liquid; and  
5 a casing; an opening of the storage tank largely imperviously closing with a portion of the casing.
2. Evaporator according to claim 1, wherein there is a position at which the edge of the opening of the storage tank is spaced away from the portion of the casing  
10 farther than usual.
3. Evaporator according to claim 1, wherein the storage tank is made of one piece.
4. Evaporator according to claim 1, wherein the casing comprises a gas inlet and a  
15 gas outlet, that a seal is arranged between the casing and the storage tank so as to produce a gas-proof connection between the casing and the storage tank, and that a half thread is provided to fasten the storage tank on the casing.
5. Evaporator according to claim 1, wherein the casing comprises a gas inlet and a  
20 gas outlet, that a seal is arranged between the casing and the storage tank so as to produce a gas-proof connection between the casing and the storage tank, and that a bayonet catch is provided to fasten the storage tank on the casing.
6. Evaporator according to claim 1, wherein the casing is constructed such that, when  
25 the storage tank is installed and at least partially filled with liquid, a thin liquid layer is formed in the casing next to the opening of the storage tank, above which gas can be passed along.
7. Evaporator according to claim 5, wherein a heater is disposed underneath the  
30 position provided for the thin liquid layer.
8. Evaporator according to claim 7, wherein the heater is made of a PTC-resistor.
9. Evaporator according to claim 1, wherein the evaporator further comprises a  
35 bottom part having an electrical terminal detachably connected to the casing by a spike and a catch.

10. Evaporator according to claim 6, wherein the evaporator further comprises a bottom part having an electrical terminal detachably connected to the casing by a spike and a catch, the electric contact between the heater and the electrical terminal being produced via contact surfaces on the casing and contact spring pins in the bottom part.
11. Evaporator according to claims 6, wherein the evaporator further comprises a bottom part having an electrical terminal detachably connected to the casing by a spike and a catch, the electric contact between the heater and the electrical terminal being produced via plugs mechanically connected to the upper part and sockets arranged in the bottom part in a hidden manner.
12. Evaporator according to claim 4, wherein a gas lock is located between the gas inlet and the gas outlet.
13. Storage tank for a liquid with an opening, wherein the opening forms a substantially even rim with a notch.
14. Casing for an evaporator for accommodating a storage tank, wherein the casing comprises a portion formed such that it substantially imperviously closes with an opening of the storage tank.